

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Johann MAGG et al.
Application Number: 10/587,224
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Group Art Unit: 3742
Examiner: Lindsey C. Teaters
Title: COFFEE MACHINE COMPRISING CONTINUOUS
HEATER

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Pursuant to 37 CFR 1.192, Appellants hereby file an appeal brief in the above-identified application. This Appeal Brief is accompanied by the requisite fee set forth in 37 CFR 1.17(f).

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(1) REAL PARTY IN INTEREST

The real party in interest is BSH Bosch und Siemens Hausgeräte GmbH. The application and the invention disclosed in the application were assigned to BSH Bosch und Siemens Hausgeräte GmbH by virtue of an Assignment executed on September 19, 2006, which is recorded at Reel 18138, Frame 419 of the U.S. Patent & Trademark Assignment Records, effective April 10, 2007.

(2) RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) STATUS OF CLAIMS

Claims 1-9, 11, 12, 15 and 17 have been canceled. Claims 10, 13, 14, 16 and 18-23 are pending and stand rejected. The rejection of Claims 10, 13, 14, 16 and 18-23 is being appealed.

(4) STATUS OF AMENDMENTS

All Amendments, including the Amendment filed February 4, 2010, have been entered.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

A description of the subject matter recited in the pending claims that are argued separately is set forth below. This description is made in connection with Figures 1 and 2, and the description identifies the reference numbers in the drawings that correspond

to the recited claim features. The description also provides an indication of the portions of the specification that provide support for these features.

A. Claim 10

Claim 10 is directed to a coffee machine for preparing coffee using coffee pads. The basic elements of the coffee machine are discussed in the specification at page 4, lines 21-32.

Claim 10 recites a continuous heater provided with a water guiding pipe 40 that is thermally connected to two heating rods 42, 44 provided at opposite sides of the pipe 40 by means of contact surfaces. These features of claim 10 are discussed in the specification at page 3, lines 1-6, and at page 5, lines 7-9.

Claim 10 further recites a pump 32 for transporting water through the continuous heater. This feature of claim 10 is discussed in the specification at page 5, lines 1-6.

Claim 10 also recites that all of the contact surfaces of the pipe 40 and the heating rods 42, 44 are flat. These features of claim 10 are discussed in the specification at page 2, lines 23-29, and at page 5, lines 28-31.

Claim 10 further recites that the pipe 40 has ends into which hose-like flexible tube connecting pieces 66, 68 of a water supply and a water exit are inserted. These features of claim 10 are discussed in the specification at page 3, lines 19-23, and at page 6, lines 3-6.

Claim 10 further recites that the connecting pieces 66, 68 are made of plastic and comprise securing means 74, 76, 78, 80, for securing the continuous heater on a housing of the coffee machine. These features of claim 10 are discussed in the specification between page 3, line 29 and page 4, line 2, and at page 6, lines 6-11.

B. Claim 16

Claim 16 depends from claim 10 and further recites that the connecting pieces are provided with seals 70. This feature of claim 16 is discussed in the specification at page 3, lines 25-27 and at page 6, lines 3-6.

C. Claim 18

Claim 18 depends from claim 10 and further recites that holders are provided on the securing means of the connecting pieces. Claim 18 recites that the holders are configured to receive additional components of the coffee machine. These features of claim 18 are discussed in the specification at page 4, lines 4-5, and at page 6, lines 8-14.

D. Claim 19

Claim 19 is also directed to a coffee machine for preparing coffee using coffee pads. The basic elements of the coffee machine are discussed in the specification at page 4, lines 21-32.

Claim 19 recites a continuous heater provided with a water-guiding pipe 40. Claim 19 further recites that two heating rods 42, 44 are connected to the pipe 40 by corresponding contact surfaces. Claim 19 recites that all of the contact surfaces between the two heating rods 42, 44 and the pipe 40 are flattened. These aspects of claim 19 are discussed in the specification at page 2, lines 23-29, page 3, lines 1-6, and at page 5, lines 7-9 and 29-31.

Claim 19 also recites a pump cooperable with the continuous heater and transporting water through the continuous heater. The pump is identified with reference numeral 32 and this feature of claim 19 is discussed in the specification at page 5, lines 1-6.

Claim 19 also recites that the pipe 40 has ends into which hose-like flexible tube connecting pieces 66, 68 of the water supply and the water exit are inserted. Claim 19 also recites that the connecting pieces are made of plastic and comprise securing means 74, 76, 78, 80 for securing the continuous heater on a housing of the coffee machine. These aspects of claim 19 are discussed in the specification at page 3, lines 19-23, between page 3, line 29 and page 4, line 2, and at page 6, lines 3-11.

E. Claim 22

Claim 22 depends from claim 19 and recites that the connecting pieces are provided with seals 70. This feature of claim 22 is discussed in the specification at page 3, lines 25-27 and at page 6, lines 3-6.

F. Claim 23

Claim 23 depends from claim 19 and further recites holders provided on the securing means, the holders being configured to receive additional components of the coffee machine. These aspects of claim 23 are discussed in the specification at page 4, lines 4-5, and at page 6, lines 8-14.

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 10, 13, 14, 18-21 and 23 are obvious, under 35 U.S.C. §103(a), over PCT Publication No. WO 03/030696 to Fanzutti et al., in view of U.S. Patent No. 5,367,607 to Hufnagl, and further in view of U.S. Patent Publication No. 2004/0009281 to Green.

B. Whether claims 16 and 22 are obvious, under 35 U.S.C. §103(a), over Fanzutti, in view of Hufnagl, and further in view of Green and U.S. Patent Publication No. 2003/0108343 to Buzzi.

(7) ARGUMENT

Applicants note that the December 10, 2009 final Office Action objected to claims 13 and 14 and rejected claims 13, 14 and 18 under 35 U.S.C. §112, second paragraph, as allegedly indefinite. Applicants revised these claims to obviate the objection and the rejection in the Amendment filed February 4, 2010, and this

Amendment has been entered. Accordingly, Applicants believe that the objection and rejection have been traversed.

A. Claims 10, 13, 14, 18-21 and 23

Claims 10, 13, 14, 18-21 and 23 were rejected under 35 U.S.C. 103(a) over PCT Publication No. WO 03/030696 to Fanzutti et al. (hereinafter "Fanzutti"), in view of US Patent No. 5,367,607 to Hufnagl et al. (hereinafter "Hufnagl"), and further in view of US Patent Publication No. 2004/0009281 to Green (hereinafter "Green"). For the reasons provided below, it is respectfully submitted that the rejection should be withdrawn.

1. Claims 10, 13, 14 and 19-21

Independent claim 10 recites a coffee machine that includes a water-guiding pipe thermally connected to two heating rods provided at opposite sides of the pipe by means of contact surfaces. Claim 10 recites that all of the contact surfaces of the pipe and the heating rods are flat. Claim 10 also recites that the pipe has ends, into which hose-like flexible tube connecting pieces of a water supply and a water exit are inserted. Claim 10 recites that the connecting pieces are made of plastic and comprise securing means for securing the continuous heater on a housing of the coffee machine.

Independent claim 19 is also directed to a coffee machine. Claim 19 recites a continuous heater provided with a water-guiding pipe. Claim 19 recites two heating rods provided on opposite sides of the pipe and thermally connected to the pipe by corresponding contact surfaces, wherein all of the contact surfaces between the two heating rods and the pipe are flattened. Claim 19 also recites that the pipe has ends into which hose-like flexible tube connecting pieces of a water supply and a water exit

are inserted. Finally, claim 19 recites that the connecting pieces are made of plastic and comprise securing means for securing the continuous heater on the housing of the coffee machine.

The Fanzutti reference discloses a coffee maker. The coffee maker includes a continuous heater which is illustrated in Figure 4 of that reference. As shown in Figure 4 of Fanzutti, the continuous heater includes a water pipe 140 and two heating elements 142 which are positioned on opposite sides of water pipe 140. The heating elements and the water pipe 140 are then positioned within a sleeve 120. Applicants note that the abutting surfaces between the heating elements 142 and the water pipe 140 are curved, which means that the water pipe 140 retains its original cylindrical shape. No attempt is made to flatten the walls of the pipe. For this reason, the heating elements include curved abutting surfaces to accommodate the exterior cylindrical surface of the water pipe 140.

End caps 136, 138 are positioned on either end of the sleeve 120, and the water pipe 140 extends through the end caps 136, 138. Fittings 132, 134 are then attached to the end caps 136, 138. It appears that the ends of the fittings 132, 134 abut the ends of the water pipe 140.

The Hufnagl reference also discloses a beverage maker which includes a heating element. As illustrated in Figures 1 and 2 of that reference, a U-shaped water tube 6 is located beneath a liquid vessel 2. A U-shaped heating element 3 is attached to the bottom surface of the U-shaped water tube 6. Hufnagl discloses that the upper surface 14 of the U-shaped heating element 3 is flattened. This flattened upper surface 14 of the heating element 3 is then joined to the bottom of the water tube 6 by soldering.

Hufnagl indicates that the solder joint between the heating element 3 and the U-shaped water tube 6 establishes good thermal conduction between the heating element 3 and the water tube 6.

Applicants note that the Hufnagl reference also discloses that the water tube 6 retains a cylindrical shape. Hufnagl makes no attempt to flatten the bottom surface of the water tube 6. Instead, Hufnagl teaches that it is necessary to utilize solder to fill in the gaps between the cylindrical bottom of the water tube 6 and the flattened top of the heating element 3.

The Office Action admits that the Fanzutti and Hufnagl references fail to disclose or suggest a coffee maker which includes the claimed connecting pieces made of plastic. The Office Action asserts that it would have been obvious based on the disclosure of the Green reference, to modify the Fanzutti and Hufnagl references so that they include connecting pieces made of plastic. Applicants respectfully disagree.

The Green reference discloses a system and method for producing foamed and steamed milk for hot beverages. As shown in Fig. 1 of the Green reference, the device includes a refrigeration chamber 155 which holds a milk supply 120. A supply line 140 leads from the milk supply 120 to a milk pump 130 which pumps the milk into a hose connector 185. The device also includes an air pump 170 which pumps air into the hose connector 185. The mixture of pressurized air and milk then move through a supply line 220 to a separate nozzle body 240.

A steam generator 270 supplies steam through a steam hose 280 to the nozzle body 240. The milk and compressed air entering the nozzle body 240 through the

supply line 220 are mixed with steam in the nozzle body 240. The steamed milk is then dispensed through a nozzle.

Although the Green reference teaches the use of a plastic hose connector 185, Green teaches that the plastic hose connector 185 should be used to connect a milk supply line and an air pressure supply line. Applicants also note that the hose connector is located on the refrigeration container 155. Accordingly, the hose connector is not subjected to any significant heat, such as from a heating element.

The Fanzutti and Hufnagl references are both directed to devices which include heaters which heat water moving through a water supply line. The Office Action asserts that one of ordinary skill in the art would have found it obvious to use a hose connector as disclosed in the Green reference to connect the water supply lines of either the Fanzutti or Hufnagl references at locations closely adjacent to the heating elements in those devices. Applicants respectfully submit that one of ordinary skill in the art would not have found it obvious to make this substitution.

As noted above, Green merely teaches the use of a plastic hose connector where no heating elements are present. In fact, Green's plastic connector is actually located on a refrigeration chamber. It is respectfully submitted that one of ordinary skill in the art would not install such a plastic connector closely adjacent to any heating elements for fear that the heating elements would melt or significantly damage the plastic connector. Accordingly, it is respectfully submitted that one of ordinary skill in the art would not have found it obvious to modify the Fanzutti or Hufnagl references to include the Green plastic hose connector at the ends of a water pipe connected to one or more heating elements. For all of the above reasons, it is respectfully submitted that

the combination is improper and that the rejection should be withdrawn on these grounds alone.

Moreover, Applicants note that independent claims 10 and 19 both recite the use of two heating elements placed on opposite sides of a water pipe, wherein all of the contact surfaces between the water pipe and the heating rods are flattened. Although the Fanzutti reference disclosed two heating elements, Fanzutti specifically teaches that all of the contact surfaces between the water pipe and the heating elements should be curved.

The Hufnagl reference only teaches the use of a single heating element. And Hufnagl teaches that the water supply pipe should remain curved, and that only one surface of the heater should be flattened. Hufnagl teaches that a soldered connection between the flattened surface of the heater and the curved pipe allows for heat transfer between these two elements. Nevertheless, Hufnagl does not teach flattening the contact surface on the water pipe.

Because none of the references of record disclose or suggest flattening a cylindrical water pipe to provide flattened contact surfaces on the water pipe that can contact corresponding flattened surfaces of heater elements, it is respectfully submitted that claims 10 and 19 are allowable over even the improper combination of these three references. Claims 13 and 14 depend from claim 10, and claims 20 and 21 depend from claim 19. It is respectfully submitted that the dependent claims are also allowable over even the improper combination of references for all the reasons discussed above, and for the additional features which they recite.

2. Claims 18 and 23

Claim 18 depends from claim 10 and claim 23 depends from claim 19. It is respectfully submitted that claims 18 and 23 are allowable for all the reasons discussed above.

In addition, both of these claims further recite holders, provided on the recited securing means, the holders being configured to receive additional components of the coffee machine. None of the references disclose or suggest that holders are provided on any securing means which are part of flexible tube connecting pieces. It is respectfully submitted that claims 18 and 23 are also allowable over all of the references of record for these additional reasons.

In view of all the foregoing, it is respectfully submitted that the rejection of claims 10, 13, 14, 18-21 and 23 should be withdrawn.

B. Claims 16 and 22

Claims 16 and 22 were rejected under 35 U.S.C. §103(a) over Fanzutti, in view of Hufnagl, and further in view of Green and U.S. Patent Publication No. 2003/0108343 to Buzzi. For the reasons provided below, it is respectfully submitted that the rejection should be withdrawn.

For all the reasons discussed above, it is respectfully submitted that it is improper to combine the Green reference with the Fanzutti and Hufnagl references. Accordingly, it is respectfully submitted that the rejection of claims 16 and 22 should also be withdrawn on these grounds alone.

Moreover, claim 16 depends from claim 10 and claim 22 depends from claim 19. It is respectfully submitted that claims 16 and 22 are allowable over even the improper

combination of Fanzutti, Hufnagl and Green for all the reasons discussed above. The Buzzi reference fails to cure the deficiencies of Fanzutti, Hufnagl and Green.

Accordingly, it is respectfully submitted that claims 16 and 22 are allowable over the improper combination of all four references for the reasons discussed above in connection with independent claims 10 and 19, and for the additional features which these claims recite.

In view of all the foregoing, withdrawal of the rejection of claims 16 and 22 is also respectfully requested.

(8) CONCLUSION

In view of the foregoing discussion, Appellants respectfully request reversal of the Examiner's rejection.

Respectfully submitted,

/Andre Pallapies/

Andre Pallapies

Registration No. 62,246

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BSH Home Appliances Corporation
100 Bosch Blvd.
New Bern, NC 28562
Phone: 252-639-7644
Fax: 714-845-2807
james.howard@bshg.com

CLAIMS APPENDIX

1-9. (Canceled)

10. (Rejected) A coffee machine for preparing coffee using coffee pads, which comprises a continuous heater provided with a water-guiding pipe that is thermally connected to two heating rods provided at opposite sides of the pipe by means of contact surfaces, and a pump for transporting water through the continuous heater, wherein all of the contact surfaces of the pipe and the heating rods are flat, wherein the pipe has ends into which hose-like flexible tube connecting pieces of a water supply and a water exit are inserted, and wherein the connecting pieces are made of plastic and comprise securing means for securing the continuous heater on a housing of the coffee machine.

11-12. (Canceled)

13. (Rejected) The coffee machine according to claim 10, wherein the pipe and the two heating rods are held together by a sleeve.

14. (Rejected) The coffee machine according to claim 13, wherein a temperature sensor is disposed adjacent the sleeve.

15. (Canceled)

16. (Rejected) The coffee machine according to claim 10, wherein the connecting pieces are provided with seals.

17. (Canceled)

18. (Rejected) The coffee machine according to claim 10, further comprising holders provided on the securing means, the holders being configured to receive additional components of the coffee machine.

19. (Rejected) A coffee machine for preparing coffee using coffee pads, the coffee machine comprising:

a continuous heater provided with a water-guiding pipe;

two heating rods provided on opposite sides of the pipe and thermally connected to the pipe by corresponding contact surfaces, wherein all of the contact surfaces between the two heating rods and the pipe are flattened; and

a pump cooperable with the continuous heater and transporting water through the continuous heater,

wherein the pipe has ends into which hose-like flexible tube connecting pieces of a water supply and a water exit are inserted, and wherein the connecting pieces are made of plastic and comprise securing means for securing the continuous heater on a housing of the coffee machine.

20. (Rejected) The coffee machine according to claim 19, wherein the pipe and the two heating rods ~~rod~~ are held together by a sleeve.

21. (Rejected) The coffee machine according to claim 20, wherein a temperature sensor is disposed adjacent the sleeve.

22. (Rejected) The coffee machine according to claim 19, wherein the connecting pieces are provided with seals.

23. (Rejected) The coffee machine according to claim 19, further comprising holders provided on the securing means, the holders being configured to receive additional components of the coffee machine.

EVIDENCE APPENDIX

NONE

RELATED PROCEEDINGS APPENDIX

NONE